

## **ROTARY SEAL**

**Publication number:** JP9226219 (A)

**Publication date:** 1997-09-02

**Inventor(s):** OZEKI MASAYOSHI

**Applicant(s):** SHACHIHATA INDUSTRIAL

**Classification:**

- international: B41K1/10; B41K1/00; (IPC1-7): B41K1/10

### - European:

Application number: JP19960058387 19960220

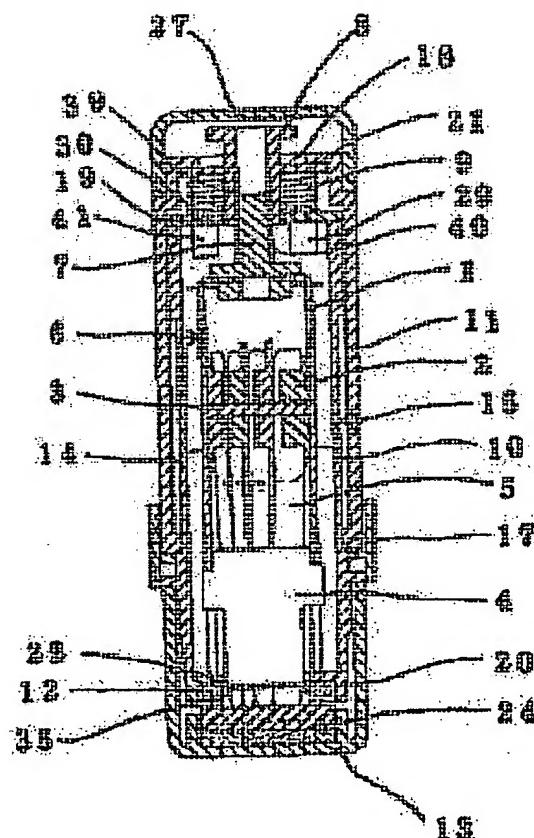
Priority number(s): JP19960058387 19960220

**Abstract of JP 9226219 (A)**

**PROBLEM TO BE SOLVED:** To eliminate the deformation of a member such as crack due to ink by providing an elastic member at the upper part separately from ink in the case of rotating a rotor by opening a sheath. **SOLUTION:** An opening window is opposed to the intermediate position of a body 10, a pair of guide pieces 14 and guide groove 15 are provided therebetween, and a sheath 11 is mounted so as to cover the body from above. The guide protrusion 17 and the groove 15 provided at the lower opening end inner wall of the sheath 11 are engaged fixedly by rotating the sheath 11 in the circumferential direction.; When the protrusion 17 is disposed at the groove 15, a locking member provided above a printing element 6 is pressed into contact with the upper opening end inner wall of the sheath 11 by an elastic member 9 provided above from the rotor 2, and hence the element itself is raised together with the sheath 11, and partly opened.

**Also published as:**

JP3712462 (B2)



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**CLAIMS**

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**[Claim(s)]**

[Claim 1] Two or more rotators 2 are supported pivotally by the frame 1 with the axis 3, and contact support of the holding piece 4 is carried out in a lower end of the frame 1, The endless printing belt 5 is stretched between said rotator 2 and the holding piece 4, and what formed the relay member 7 in the upper part is used as the printing body 6, said printing body 6 -- an inside of the tubed main part 10 -- the upper and lower sides -- it supposing that it is slid able, and the endless printing belt 5 at a lower part end of said main part 10, [ expose and ] The fixed mark carrier 20 which held the immobilization seal 12 which drilled the window 35, and drilled the window 22 is formed enabling free attachment and detachment, Are facing the mid-position of the main part 10 in the opening window 23 of a couple, and also the guide piece 14 of a couple is formed between said opening windows 23, The guide groove 15 which becomes said guide piece 14 and the main part 10 from the vertical-guides slot 15A and the circumference guide groove 15B is formed, Engagement immobilization is carried out when the derivation projection 17 and the guide groove 15 which it is equipped with the armor body 11 so that said printing body 6 and the main part 10 may be covered from the upper part, and were established in an open lower end end wall of said armor body 11 make a hoop direction rotate the armor body 11, By the member 9 from a cartridge in which the derivation projection 17 was formed up from position \*\*\*\* and the rotator 2 in the vertical-guides slot 15A. A revolving mark having raised printing body 6 the very thing up with the armor body 11, having considered the part as an opened condition since press contact of the locking member provided above the printing body 6 was carried out to an upper opening end wall of the armor body 11, having exposed the rotator 2 from an opening window of the main part 10, and making the endless printing belt 5 pivotable.

[Claim 2] A revolving mark indicated to claim 1 forming the introductory piece 16 which is not connected with said vertical-guides slot 15A on upper part extension of the vertical-guides slot 15A established in the guide piece 14 of the main part 10, and introducing the derivation projection 17 of the armor body 11.

[Claim 3] Contact support is carried out at the charge fixing collar 21 of the controller 8 which made the cover plate 30 engage with an open end of the main part 10, fixed the member 9 from a cartridge above the cover plate 30, and provided the other end of said member 9 from a cartridge in the upper part of the printing body 6, A revolving mark indicated to claims 1 and 2, wherein it raised printing body 6 the very thing up with the armor body 11, considered the part as an opened condition, exposed the rotator 2 from the main part 10 since said charge fixing collar 21 was in contact with an upper opening end wall of the armor body 11, and it makes the endless printing belt 5 pivotable.

[Claim 4] The support shelf 42 is formed in the opening window 23 upper part of main part 10 wall, carry out contact support of the one end of the member 9 from a cartridge, and contact support is carried out at the charge fixing collar 21 of the controller 8 which provided the other end in the upper part of the printing body 6, A revolving mark indicated to claims 1 and 2 since said charge fixing collar 21 was in contact with an upper opening end wall of the armor body 11, wherein it raised printing body 6 the very thing up, considered the part as an opened condition and makes the rotator 2 pivotable with the armor body 11.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Industrial Application] This invention relates to two or more endless printing belts, the date mark which has an immobilization seal in a lower end, etc.

**[0002]**

[Description of the Prior Art] This kind of invention has JP,58-39874,U (it is considered as (\*\*) below.) JP,59-19360,Y (it is considered as (\*\*) below.), JP,2-25647,Y (it is considered as (\*\*) below.), and JP,3-56372,Y (it is considered as (\*\*) below.) conventionally. (b) The frame 1 is made to hold up with the spring 10. However, not the composition that an armor body slides but the spring 10 is caudad located rather than the dial 3, and (b) differs in composition with this application. (\*\*) What is necessary is just to lengthen the gripping cylinder 26 and the barrel 1 to a sliding direction, in order to be related with a revolving dial seal like this invention, to open the gripping cylinder 26 and the barrel 1 wide and to expose the revolving dial (rotator) 17. In order to make it engaged conversely, as it is also in a specification, the engaging projection 31 and the engagement holes 32 and 33 are engaged. It is the composition of lifting the printing unit 1 up by the downward spring member 20. Therefore, this application differs in composition like (b).

[0003](\*\*) The spring member 20 is set as the dead space S under the printing unit 1, and the main case 2 and the makeup case 3 have been pulled up and down, and expose the revolving dial 9. At this time, the printing unit 1 is pushed up by the spring member 20, and makes the revolving dial 9 pivotable. Therefore, the setting method of a spring member and the engaging-and-releasing method of the main case 2 and the makeup case 3 differ from this application. Since all (b) (\*\*) (\*\*)s provided the spring member in the lower part and have applied stress, change of the member in ink and modification take place easily. (\*\*) It is a revolving dial seal similarly.

Engaging and releasing of the gripping cylinder 3 and the main case 2 is made to engage and release by the lock ring 41.

However, by using the lock ring 41, part mark also increase, it becomes a high cost, and

there is inconvenient nature that it cannot engage and release further unless it rotates the lock ring 41 single hand certainly. because -- if it is impossible to enlarge the lock ring 41 and this is enlarged -- disclosure and operation of a rotator -- butter fish -- \*\* .

[0004]

[Problem(s) to be Solved by the Invention] Since it is elegance conventionally [ above ], the stamp has been grasped single hand during seal operation, When changing the date etc., in order to have to grasp a lock ring single hand certainly, to have to grasp the lower part of a gripping cylinder and a main case and to make a rotator expose, it is so desirable that a lock ring is small, but if small, it will be hard to grasp and will be hard to operate it. Since the member from a cartridge is provided the neighborhood [ an ink impregnation body etc. ], modification by the stress concerning a synthetic resin member, etc. arise. Therefore, do not use a lock ring, but make it rotate easily certainly, an armor body and a main part are made to engage and release, and a rotator is made to expose. Part mark are aimed few at a cost cut. When opening a gripping cylinder and a main case, said gripping cylinder and said main case do not dissociate, If engagement of a gripping cylinder and a main case is removed for the purpose of preventing loss of a gripping cylinder, while an endless printing belt will become move a printing body up by the member from a cartridge, etc., and pivotable, it is made easy for an armor body to also move up and to use. This member from a cartridge provides the revolving mark which can be set as the position which is not influenced by ink.

[0005]

[Means for Solving the Problem] Two or more rotators 2 are supported pivotally by the frame 1 with the axis 3, and contact support of the holding piece 4 is carried out in a lower end of the frame 1, The endless printing belt 5 is stretched between said rotator 2 and the holding piece 4, and what formed the relay member 7 in the upper part is used as the printing body 6, said printing body 6 -- an inside of the tubed main part 10 -- the upper and lower sides -- it supposing that it is slidale, and the endless printing belt 5 at a lower part end of said main part 10, [ expose and ] The fixed mark carrier 20 which held the immobilization seal 12 which drilled the window 35, and drilled the window 22 is formed enabling free attachment and detachment, Are facing the mid-position of the main part 10 in the opening window 23 of a couple, and also the guide piece 14 of a couple is formed between said opening windows 23, The guide groove 15 which becomes said guide piece 14 and the main part 10 from the vertical-guides slot 15A and the circumference guide groove 15B is formed, Engagement immobilization is carried out when the derivation projection 17 and the guide groove 15 which it is equipped with the armor body 11 so that said printing body 6 and the main part 10 may be covered from the upper part, and were established in an open lower end end wall of said armor body 11 make a hoop direction rotate the armor body 11, By the member 9 from a cartridge in which the derivation projection 17 was formed up from position \*\*\*\* and the rotator 2 in the vertical-guides slot 15A. It is a revolving mark having raised printing body 6 the very thing up with the armor body 11, having considered the part

as an opened condition since press contact of the locking member provided above the printing body 6 was carried out to an upper opening end wall of the armor body 11, having exposed the rotator 2 from an opening window of the main part 10, and making the endless printing belt 5 pivotable.

[0006]

[Function]The ink pad is provided in the bottom of the cap 13, at the time of non-use, the immobilization seal 12 and the endless printing belt 5 are always contacted, and ink is supplied. In order to use the revolving mark of this invention, by pulling said cap 13 for concavo-convex fitting (click fitting) of the cap 13 and the main part 10 caudad, the lower part and the immobilization seal 12 of the main part 10 were exposed, and the endless printing belt 5 is further exposed from the window 22 drilled by said immobilization seal 12. Press seal is possible to a seal thing in this state. If it is going to change the date etc., a certain direction will be rotated with the armor body 11 and the main part 10 from the above-mentioned state. Then, the derivation projection 17 provided in the open lower end end inner surface of the armor body 11 is derived to the guide groove 15A of a circumferencial direction established in the surface of the main part 10. Although the derivation projection 17 is always in contact with the fixed end 33 of the guide groove 15A of a circumferencial direction, it is located with rotation of the armor body 11 down the guide groove 15B of the lengthwise direction established in the surface of the guide piece 14.

[0007]At this time, the member 9 from a cartridge provided above the rotator 2, Since the power of it being provided between the cover plates 30 which engaged with the upper opening end of the charge fixing collar 21 of the controller 8 and the main part 10, and always raising the printing body 6 up is working, While raising printing body 6 the very thing up and making it located up from the window 35. Since the derivation projection 17 is located in the guide groove 15B established in the guide piece 14, the armor body 11 was opened in part, the upper surface and the cover plate 30 of the relay member 7 contacted, and it has regulated movement to the upper part of the printing body 6 by the power of the member 9 from a cartridge, and the relay member 7. By pulling the armor body 11 to a lengthwise direction in this state, the derivation projection 17 will be derived to the longitudinal guide slot 15B, will move up, and will expose the rotator 2.

[0008]If the armor body 11 is pulled up up to the last, the derivation projection 17 will be contacted by the upper bed side 15C established above the guide groove 15B, it will stop at it, and the opening window 23 will be opened fully. And the rotator 2 is exposed thoroughly and the nothing endless printing belt 5 can be rotated as it is pivotable. The armor body 11 and the main part 10 do not separate. Next, if it finishes changing, it will be made to operate contrary to the above and will return to the state where it can seal again. At this time, the lowermost end side of the immobilization seal 12 and the endless printing belt 5 is made to contact the ink pad 24 provided in the inner bottom of the cap 13, transfer applying of the ink is carried out, it offers on the next seal, and seal becomes possible. In Example 2, formed the support shelf 42 in the upper part wall of the tubed main part 10, the lower end

of the member 9 from a cartridge was made to contact, and movement to the upper part of the printing body 6 by operation of the member 9 from a cartridge and the relay member 7 is regulated further. Others are not different from an operation of Example 1.

[0009]

[Example]The 1st example of this invention is described to details from drawing 1, drawing 2, drawing 3, drawing 4, and drawing 5. 1 is a U-shaped frame.

The relay member 7 is fixed and formed in the upper part, the support groove 25 which supports the axis 3 was established in pars intermedia, and the notch 26 holding the holding piece 4 is formed in the lower part.

The male screw child 40 is formed in the relay member 7. It is a rotator and the action part 31 and the endless printing belt 5 which became \*\*\*\*\*-like become the rotator 2 from endless printing belt Kakebe 32 hung and stretched, and 2 hangs the endless printing belt 5 of the rotator 2 (2A, 2B) and the same number, and is stretched.

The axis 3 supports some rotators 2 pivotally pivotable, and rotator 2B of both sides is supported by the support groove 25 of the frame 1 with said axis 3.

The support groove 25 consists of an introduction groove used at the time of attachment, and a fixed slot which supports the axis 3.

[0010]4 is a holding piece.

Contact support is carried out at the notch 26 provided in the U-shaped both ends of the frame 1, and the endless printing belt 5 is stretched between the rotators 2.

6 is a printing body.

It consists of the frame 1, the axis 3, the rotator 2, the holding piece 4, and the endless printing belt 5 containing said relay member 7.

8 is a controller.

The female screw child 39 is formed in the wall of the lower pipe, and screw engagement is carried out with the upper male screw child 40 of the relay member 7.

therefore -- having the amount of engagement of the male screw child 40 of the relay member 7, and the female screw child 39 by which screw engagement is carried out if the controller 8 is rotated -- the printing body 6 -- the inside of the main part 10 -- the upper and lower sides -- it is made slidale and the height of the lowest position of the endless printing belt 5 is adjusted. Thereby, the stamp face position of the immobilization seal 12 and the endless printing belt 5 can be adjusted to same height. The charge fixing collar 21 of the controller 8 was contacted in the member 9 from a cartridge, and it is always in contact with the upper opening end (contact shelf 36) of the armor body 11 further.

[0011]9 is a member from a cartridge.

What is used is a compression coil spring.

The member 9 from a cartridge is formed up from the rotator 2.

It has the operation which from-cartridge-moves the printing body 6 and the armor body 11 in part up by the position of the armor body 11 and the main part 10.

The lower part end of the member 9 from a cartridge is contacted by the cover plate 30, an

upper end is contacted by the undersurface of the charge fixing collar 21 stretched by the controller 8, and said member 9 from a cartridge is from-cartridge-supporting the printing body 6, the controller 8, and the armor body 11 up. 10 is a tubed main part.

The opening window 23 which a couple faces is formed in the mid-position.

A phase has about 90 degrees of the guide pieces 14, and the guide groove 15B is established in the surface in the lengthwise direction (as parallel as an axis).

The introductory piece 16 is formed on upper part extension of the guide groove 15B.

When the introductory piece 16 attaches the armor body 11, and impossible ON \*\* is impossible, it is required. The guide groove 15A (it is a hoop direction to an axis) is open for free passage from the bottom of the guide groove 15B to the hoop direction.

[0012]The engagement part 28 is formed in the lower part of said main part 10, and the fixed mark carrier 20 which has the immobilization seal 12 is being engaged, enabling free attachment and detachment. moreover -- having allotted the printing body 6 to the inside of the main part 10 -- the position of the method end of the lowest of the endless printing belt 5 -- the window 22 of the same stamp face position as the immobilization seal 12 to the fixed mark carrier 20 -- up to an upper position -- the upper and lower sides -- it has provided slidably. The projected part 34 engaged enabling free attachment and detachment of the cap 13 is provided in said main part 10 so that the stamp face which the endless printing belt 5 exposes from the immobilization seal 12 and the window 35 may be covered. It slides from the window 22 of said fixed mark carrier 20 to an upper position by sliding of this printing body 6, and also if the armor body 11 is pulled up up, the derivation projection 17 will expose the rotator 2 thoroughly in contact with the upper bed side 15C of the guide groove 15B, and it becomes possible to change the printed part of the endless printing belt 5. The four holes 41 are formed in the upper part of said main part 10, and it engages with the engagement leg 29 stretched by one side of the cover plate 30. The engagement legs 29 are the hole 41 and same number \*\*\*\*\*.

[0013]The cover plate 30 is a board of doughnut form, and when said cover plate 30 is attached, it has always exposed the controller 8 from the hole 19. 11 is a tubed armor body. The controller cap 27 was made to attach enabling free attachment and detachment, and the derivation projection 17 of the couple which faces is formed in the open lower end end wall so that the upper window 18 of an upper opening end may be covered.

The derivation projection 17 was located in the fixed end 33 of the guide groove 15A, the armor body 11 and the main part 10 were engaged, and, naturally said armor body 11 has always covered the opening window 23. Contact derivation of the derivation projection 17 is carried out in said guide groove 15 (guide grooves 15A and 15B).

[0014]13 is a cylinder-like-object-with-base-like cap and has formed in the bottom the ink pad 24 with which ink was impregnated.

It engages with the projected part 34 provided in the peripheral face of the main part 10, enabling free attachment and detachment.

Said ink pad 24 may be from-cartridge-supported by the member from a cartridge. At the

time of non-use, the immobilization seal 12 and the endless printing belt 5 are contacted by the ink pad 24 provided in the bottom of the cap 13, and ink is supplied. Said cap 13 is removed and it seals.

[0015]Next, in order to attach the revolving mark of this invention, the holding piece 4 is made to hold in the lower part of the frame 1, Make several sets and the axis 3 support the rotator 2 which hung the endless printing belt 5, enabling free rotation, it is made to hold to the support groove 25 in which said axis 3 was formed in the pars intermedia of said frame, and set-up support of the endless printing belt 5 is carried out with said holding piece 4. and the printing body 6 -- main part 10 inside -- the upper and lower sides -- it allocates slidably and the cover plate 30 is put from the upper part, and as exposed of the relay member 7, the engagement leg 29 and the hole 41 of said cover plate 30 make it engaged from the hole 19 And the member 9 from a cartridge is fixed on the cover plate 30, the charge fixing collar 21 of the controller 8 is contacted in the upper bed of said member 9 from a cartridge, and the female screw child 39 of said controller 8 and the male screw child 40 of the discontinuation member 7 are doing screw engagement. In this way, the printing body 6 and the controller 8 are from-cartridge-supported up.

[0016]Next, the armor body 11 is covered and put on the main part 10 from the upper part. locating the position of the derivation projection 17 on extension of the guide groove 15B, and performing impossible ON \*\* from the upper part like the above at this time, -- said derivation projection 17 and the guide groove 15B -- the upper and lower sides -- it constructs slidably. If the introductory piece 16 which is not open for free passage in the guide groove 15B is formed on [ other than impossible ON \*\* ] upper part extension of the guide groove 15B, it will become further easy to perform attachment of the armor body 11.

[0017]Depressing the armor body 11 along said guide groove 15B, and carrying out press contact of the charge fixing collar 21 of the controller 8 to the upper opening end wall of said armor body 11. Move said derivation projection 17 caudad, make it move to the guide groove 15A established in the hoop direction of the main part 10 further, and said derivation projection 17 the about 33-fixed end guide groove 15A, Since it is shallow, while pressing the derivation projection 17 outside and making the armor body 11 fix, it can be made the same stamp face position as the position of the method end of the lowest of the endless printing belt 5 exposed from the window 35 of the immobilization seal 12 formed in the fixed mark carrier 20, and the immobilization seal 12, and seal is made possible. The controller cap 27 is made to fit in from the upper part of the armor body 11 finally, enabling free attachment and detachment, from a lower part, it fits in enabling free attachment and detachment, and the cap 13 is attached.

[0018]having the armor body 11 and the main part 10, if it is going to change the date of the revolving mark of this invention, etc. -- right and left -- either is rotated. Then, the derivation projection 17 provided in the lower part internal surface of the armor body 11 is derived by the guide groove 15A of a circumferencial direction which came out from the shallow place of the about 33-fixed end guide groove 15A, and was established in the peripheral face of

the main part 10. The derivation projection 17 is located down the longitudinal guide slot 15B of the guide piece 14 with rotation of the armor body 11. Then, since the upper opening end of the armor body 11 is in contact with the charge fixing collar 21, resists the member 9 from a cartridge and is pressed caudad, if the derivation projection 17 is located down the guide groove 15B, the armor body 11, the printing body 6, and the controller 8 will from-cartridge-move up by the member 9 from a cartridge. Then, while a few will be opened the armor body 11 wide and the printing body 6 and the controller 8 are located up, the lowest point of the endless printing belt 5 is located up from the window 22.

[0019]When the armor body 11 is pulled up to a lengthwise direction in this state, the derivation projection 17 will be derived to the longitudinal guide slot 15B, will move up, and will expose the rotator 2. The rotator 2 is rotated in this state and the date is changed. If it finishes changing, it will be made to operate contrary to the above and will return to the state where it can seal again. In order to make it the same as that of the lowest stamp face position of the endless printing belt 5, and the stamp face position of the immobilization seal 12 again, click fitting with the controller cap 27 and the upper part of the armor body 11 is canceled. Then, the controller 8 is exposed, and since it is carrying out screw engagement with the relay member 7 if it is made to rotate, in some of amount of engagement, rocking of the printing body 6 is enabled up and down, and it is adjusted.

[0020]If drawing 6 explains the 2nd example in detail, it loses the cover plate 30 used in the 1st example, forms the support shelf 42 in the upper inner wall of the main part 10, carries out contact support of the lower end of the member 9 from a cartridge, and is carrying out contact support of the upper bed of said member 9 from a cartridge at the charge fixing collar 21 of the controller 8. The hole 19 is formed in the upper opening end of the main part 10, the controller 8 is exposed, and contact regulation is carried out in the upper position of the relay member 7 and the printing body 6. At this time, the support shelf 42 is formed in the main part 10 and one. It carries out screw engagement of the controller 8 while the method of grapple makes the printing body 6 insert in main part 10 inside from the bottom, makes the relay member 7 expose from the hole 45 and fixes the member 9 from a cartridge. And fit fixing of the attachment and detachment of the fixed mark carrier 20 is made free to the open lower end end of the main part 10.

[0021]About construction material, the main part 10, the frame 1, the holding piece 4, the fixed mark carrier 20, the cover plate 30, the armor body 11, the rotator 2, the controller 8, the cap 13, and the controller cap 27 may be the synthetic resins of thermoplastics or thermosetting resin. The frame 1 and the holding piece 4 may be metal parts.

[0022]

[Effect]Since it is the above composition, a lock ring is not used, but it can be made to be able to rotate easily certainly, the armor body 11 and the main part 10 can be made to be able to engage and release, and the rotator 2 can be made to expose. Part mark and a cost cut are enabled by carrying out like this. When opening the armor body 11 and rotating the rotator 2, modification of members, such as a crack in ink, was lost by having detached

from ink and having formed the member 9 from a cartridge in the upper part. Since not only the printing body 6 but the armor body 11 can be moved up by the member 9 from a cartridge, it is easy to use it, and further, since the armor body 11 and the main part 10 do not dissociate, the armor body 11 is not lost.

[0023]

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**DESCRIPTION OF DRAWINGS**

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**[Brief Description of the Drawings]**

[Drawing 1]The sectional view of the 1st example of this invention

[Drawing 2]The open section figure of the armor body 11 of the 1st example of this invention

[Drawing 3]The perspective view of the partial parts of the 1st example of this invention

[Drawing 4]The abbreviated explanatory view in which the derivation projection 17 of the 1st example of this invention is located in the guide groove 15A

[Drawing 5]The abbreviated explanatory view in which the derivation projection 17 of the 1st example of this invention is located in the guide groove 15B

[Drawing 6]The sectional view of the 2nd example of this invention

[0024]

**[Description of Notations]**

- 1: Frame
- 2: Rotator
- 3: Axis
- 4: Holding piece
- 5: Endless printing belt
- 6: Printing body
- 7: Relay member
- 8: Controller
- 9: The member from a cartridge
- 10: Main part
- 11: Armor body
- 12: Immobilization seal
- 13: Cap
- 14: Guide piece
- 15: Guide groove
- 15A: Guide groove

- 15B: Guide groove
- 16: An introductory piece
- 17: Derivation projection
- 18: Upper window
- 19: Hole
- 22: Window
- 23: Opening window
- 24: Ink pad
- 25: Support groove
- 26: Notch
- 27: Controller cap
- 28: Engagement part
- 29: Engagement leg
- 30: Cover plate
- 31: Action part
- 32: Endless printing belt Kakebe
- 33: Fixed end
- 34: Projected part
- 35: Window
- 39: Female screw child
- 40: Male screw child
- 41: Hole
- 42: Support shelf

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[Translation done.]

**\* NOTICES \***

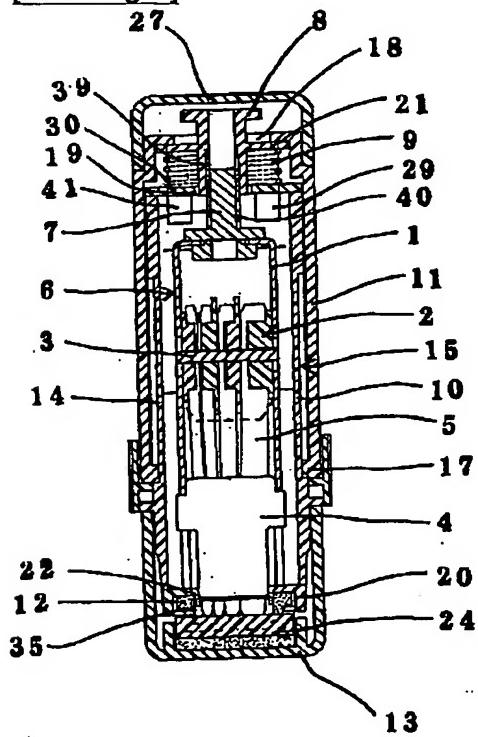
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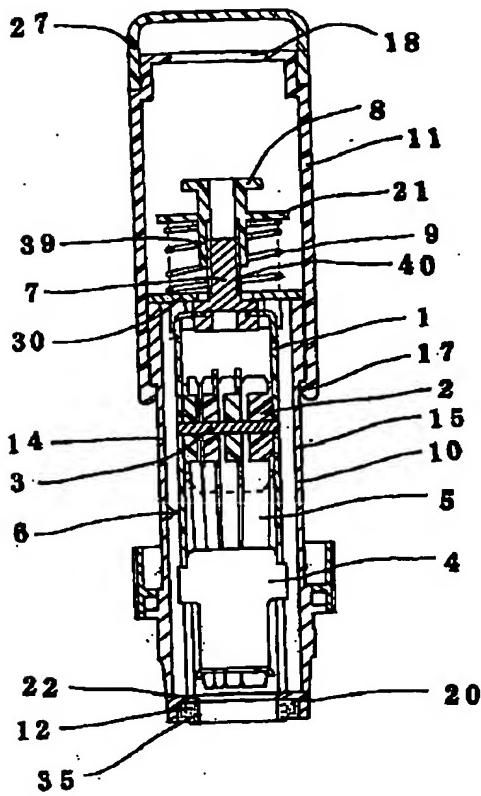
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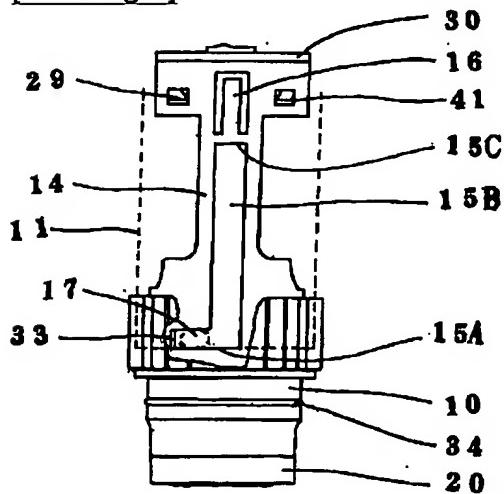
**DRAWINGS**

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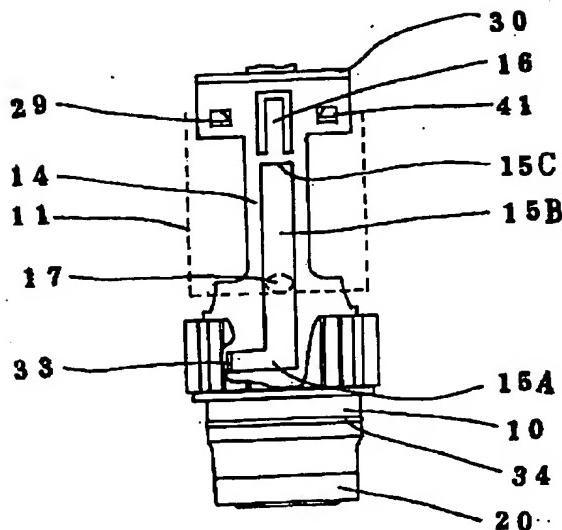
**[Drawing 1]****[Drawing 2]**



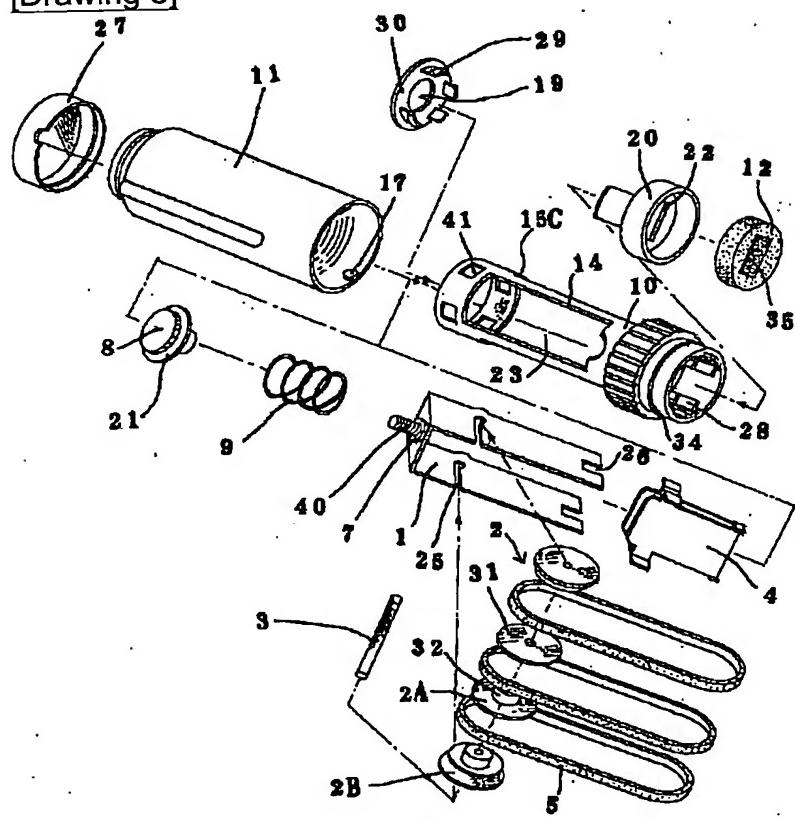
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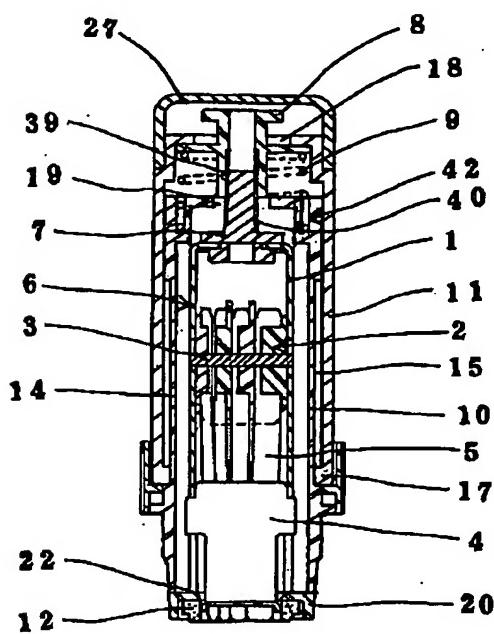
[Drawing 5]



[Drawing 3]



[Drawing 6]



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[Translation done.]

(19) 日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開平9-226219

(43) 公開日 平成9年(1997)9月2日

(51) Int.Cl.<sup>6</sup>  
B 41 K 1/10

識別記号

庁内整理番号

F I  
B 41 K 1/10

技術表示箇所  
Z  
G

審査請求 未請求 請求項の数4 FD (全7頁)

(21) 出願番号 特願平8-58387

(22) 出願日 平成8年(1996)2月20日

(71) 出願人 390017891

シャチハタ工業株式会社

愛知県名古屋市西区天塚町4丁目69番地

(72) 発明者 尾関 正義

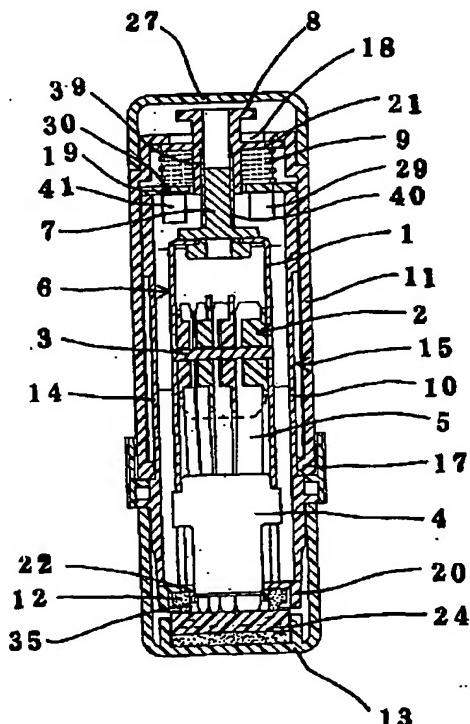
愛知県江南市大字小林字寺屋敷87番地の2

(54) 【発明の名称】 回転印

(57) 【要約】 (修正有)

【解決手段】 本体10の中間位置に開口窓23を相対させ、それらの間に一对のガイド片14及びガイド溝15を設け、上方から本体を覆うように外装体11を装着する。外装体の下方開口端内壁に設けた誘導突起17とガイド溝15Aとが、外装体を周方向に回転させることにより係合固定する。誘導突起をガイド溝15Bに位置させると、回転子2より上方に設けた弾発部材9によって、印字体6の上方に設けられた係止部材が外装体の上方開口端内壁に押圧当接しているので、外装体とともに印字体自身を上方に持ち上げ、一部開放状態とする。

【効果】 外装体11を開けて、回転子2を回動する際、インキから離して上部に弾発部材9を設けたので、インキによるクラック等部材の変形がなくなる。



## 【特許請求の範囲】

【請求項1】 枠体1に複数個の回転子2が軸3により軸支され、枠体1の下端には支持片4が当接支持され、前記回転子2と支持片4との間に無端印字ベルト5が張設され、上部に中継部材7を設けたものを印字体6とし、前記印字体6を筒状の本体10の内部にて上下摺動可能とし、前記本体10の下方端には無端印字ベルト5を露呈し、窓35を穿設した固定印12を保持して窓22を穿設した固定印受20を着脱自在に設け、更に本体10の中間位置には一对の開口窓23を相対しており、更に前記開口窓23の間には一对のガイド片14を設け、前記ガイド片14及び本体10には垂直ガイド溝15A、円周ガイド溝15Bからなるガイド溝15を設けており、上方より前記印字体6及び本体10を覆うように外装体11が装着されており、前記外装体11の下方開口端内壁に設けた誘導突起17とガイド溝15とが外装体11を周方向に回転させることにより係合固定すること、更に、誘導突起17を垂直ガイド溝15Aに位置さると、回転子2より上方に設けられた弾発部材9により、印字体6の上方に設けられた係止部材を外装体11の上方開口端内壁に押圧当接しているので外装体11とともに印字体6自体を上方に持ち上げ一部開放状態とし、回転子2を本体10の開口窓から露呈し、無端印字ベルト5を回転可能としたことを特徴とする回転印。

【請求項2】 本体10のガイド片14に設けた垂直ガイド溝15Aの上方延長上には前記垂直ガイド溝15Aと連結しない導入片16を設け、外装体11の誘導突起17を導入することを特徴とした請求項1に記載した回転印。

【請求項3】 本体10の開口端には、蓋板30を係合させ、蓋板30の上方には弾発部材9を載設して前記弾発部材9の他端を印字体6の上部に設けた調節部8の係止鍔21に当接支持して、前記係止鍔21は外装体11の上方開口端内壁に当接しているので外装体11とともに印字体6自体を上方に持ち上げ一部開放状態とし回転子2を本体10から露呈し、無端印字ベルト5を回転可能としたことを特徴とする請求項1、2に記載した回転印。

【請求項4】 本体10内壁の開口窓23上方には、支持棚42が設けられており、弾発部材9の一端を当接支持し、他端を印字体6の上部に設けた調節部8の係止鍔21に当接支持して、前記係止鍔21は、外装体11の上方開口端内壁に当接しているので外装体11とともに印字体6自体を上方に持ち上げ一部開放状態とし回転子2を回転可能としたことを特徴とする請求項1、2に記載した回転印。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】 本発明は、複数個の無端印字ベルトと、下端に固定印を有する、日付印等に関するもので

ある。

## 【0002】

【従来の技術】 この種の発明は、従来より実開昭58-39874号(以下(イ)とする。)実公昭59-19360号(以下(ロ)とする。)、実公平2-25647号(以下(ハ)とする。)、実公平3-56372号(以下(ニ)とする。)がある。(イ)は、バネ10により上方に枠体1を上方に保持させている。しかし、(イ)は、外装体がスライドする構成ではなく、バネ10もダイヤル3よりも下方に位置し本願とは構成を異にしている。(ロ)は、本発明と同様回転ダイヤル印に関するものであり、把持筒26と筒体1を開放して、回転ダイヤル(回転子)17を露呈するには、把持筒26と筒体1を上下方向に引けばよい。また、逆に係合させるには、明細書中にもある様に、係合突起31と係合あな32、33とが係合する。尚、下方のバネ部材20により印字ユニット1を上方に持ち上げている構成である。したがって、(イ)と同様本願とは構成を異にしている。

【0003】 (ハ)は、印字ユニット1の下方にはばね部材20をデッドスペースSに設定しており主ケース2と化粧ケース3を上下に引っ張り上げて回転ダイヤル9を露呈する。この時、印字ユニット1はばね部材20により上方に押し上げられ回転ダイヤル9を回転可能にする。したがって、本願とはばね部材の設定方法、及び、主ケース2と化粧ケース3の係脱方法が異なる。また、(イ)・(ロ)・(ハ)は全て、下方でバネ部材を設けて応力を掛けているのでインキによる部材の変化、変形が起りやすい。(ニ)は、同様回転ダイヤル印であ

り、把持筒3と主ケース2の係脱は、ロックリング41により係脱させるものである。しかし、ロックリング41を使用することで、部品点数が多くなり、コスト高となり、更には、ロックリング41を確実に片手で回転させないと係脱出来ないといった不便性がある。なぜなら、ロックリング41を大きくすることは不可能で、これを大きくすると回転子の露呈と操作がしづらい。

## 【0004】

【発明が解決しようとする課題】 以上の様な従来品であるので、捺印動作中は印判を片手で握っており、日付等を変更する場合、ロックリングを確実に片手で握り、把持筒と主ケースの下部をにぎらなくてはならず、回転子を露呈させるには、ロックリングが小さい程望ましいが、小さければ握りづらく操作しにくいものとなっている。弾発部材をインキ含浸体等の近くに設けているので、合成樹脂部材にかかる応力による変形等が生じる。従って、ロックリングを使用せず、確実に容易に回転させて外装体と本体を係脱させて、回転子を露呈させる。また、部品点数を少なく、コストダウンを目的とする。更に、把持筒と主ケースを開放する際に前記把持筒と前記主ケースが分離せず、把持筒の紛失を防止することを

目的とし、把持筒と主ケースの係合を外すと弾発部材等で印字体を上方に移動させ、無端印字ベルトが回転可能となるとともに外装体も上方に移動し使用しやすくしている。また、この弾発部材は、インキの影響を受けない位置に設定できる回転印を提供するものである。

#### 【0005】

【課題を解決するための手段】枠体1に複数個の回転子2が軸3により軸支され、枠体1の下端には支持片4が当接支持され、前記回転子2と支持片4との間に無端印字ベルト5が張設され、上部に中継部材7を設けたものを印字体6とし、前記印字体6を筒状の本体10の内部にて上下摺動可能とし、前記本体10の下方端には無端印字ベルト5を露呈し、窓35を穿設した固定印12を保持して窓22を穿設した固定印受20を着脱自在に設け、更に本体10の中間位置には一対の開口窓23を相対しており、更に前記開口窓23の間には一対のガイド片14を設け、前記ガイド片14及び本体10には垂直ガイド溝15A、円周ガイド溝15Bからなるガイド溝15を設けており、上方より前記印字体6及び本体10を覆うように外装体11が装着されており、前記外装体11の下方開口端内壁に設けた誘導突起17とガイド溝15とが外装体11を周方向に回転させることにより係合固定すること、更に、誘導突起17を垂直ガイド溝15Aに位置すると、回転子2より上方に設けられた弾発部材9により、印字体6の上方に設けられた係止部材を外装体11の上方開口端内壁に押圧当接しているので外装体11とともに印字体6自体を上方に持ち上げ一部開放状態とし、回転子2を本体10の開口窓から露呈し、無端印字ベルト5を回転可能としたことを特徴とする回転印である。

#### 【0006】

【作用】キャップ13の底面にインキパッドを設けており、不使用時には、常に固定印12と無端印字ベルト5が当接されてインキを供給している。本発明の回転印を使用するには、キャップ13と本体10の凹凸嵌合(クリック嵌合)を、前記キャップ13を下方に引っ張ることによって本体10の下方部と固定印12を露呈し、更に、前記固定印12に穿設された窓22より無端印字ベルト5を露呈している。この状態で捺印物に対して、押圧捺印可能である。更に、日付等を変更しようとするならば、上記状態から外装体11と本体10をもって一定方向に回転させる。すると、外装体11の下方開口端内面に設けられた誘導突起17は、本体10の表面に設けられた、円周方向のガイド溝15Aに誘導される。誘導突起17は、當時は円周方向のガイド溝15Aの固定端33に当接しているが、外装体11の回転とともに、ガイド片14の表面に設けられた縦方向のガイド溝15Bの下方に位置する。

【0007】この時、回転子2の上方に設けられた弾発部材9は、調節部8の係止錠21と本体10の上方開口

端に係合された蓋板30の間に設けられており常に上方に印字体6を持ち上げる力が働いているので、印字体6自体を上方に持ち上げ窓35より上方に位置させるとともに誘導突起17はガイド片14に設けられたガイド溝15Bに位置しているので外装体11を一部開放し中継部材7の上面と蓋板30とが当接して弾発部材9の力による印字体6と中継部材7の上方への移動を規制している。更に、この状態で外装体11を縦方向に引っ張ることによって、誘導突起17は、縦方向ガイド溝15Bに誘導され、上方に移動して回転子2を露呈することとなる。

【0008】更に、最後まで外装体11を上方に引き上げるとガイド溝15Bの上方に設けられた上端面15Cに誘導突起17が当接されて止まり、開口窓23が全開になる。そして、回転子2を完全に露呈し、回転可能となし無端印字ベルト5の回転を行なえる。また、外装体11と本体10が外れることはない。次に、変更し終わると上記とは逆に作動させ、再び捺印可能な状態にもどる。この時、キャップ13の内底に設けられたインキパッド24に固定印12と無端印字ベルト5の最下端面を当接させて、インキを転写塗布し次の捺印にそなえ捺印可能となる。実施例2では、筒状の本体10の上方内壁に支持棚42を設けて弾発部材9の下端を当接させており、更に、弾発部材9の作用による印字体6と中継部材7の上方への移動を規制している。その他は、実施例1の作用と変わらない。

【0009】  
【実施例】本発明の第1の実施例を図1、図2、図3、図4、図5より詳細に説明する。1は、コ字状の枠体であり、上部には中継部材7が固定して設けられており、中間部に軸3を支持する支持溝25を設け、下部には支持片4を保持する切欠26を設けている。更に、中継部材7には雄螺子40を設けている。2は、回転子であり回転子2には、のこ歯状になった作用部31と無端印字ベルト5が掛けられ張設される無端印字ベルト掛部32とからなり、回転子2(2A、2B)と同数の無端印字ベルト5を掛け張設されており、数個の回転子2を軸3により回転可能に軸支されており、両側の回転子2Bは枠体1の支持溝25に前記軸3により支持されている。40支持溝25は、組付け時に使用する導入溝と軸3を支持する固定溝とからなる。

【0010】4は、支持片であり、枠体1のコ字状の両端に設けられた切欠26に当接支持され、回転子2との間で無端印字ベルト5を張設する。6は、印字体であり、前記中継部材7を含む枠体1、軸3、回転子2、支持片4、及び無端印字ベルト5よりなるものである。8は、調節部であり、下部の筒の内壁には雌螺子39が設けられており、中継部材7の上方の雄螺子40と螺子係合している。したがって、調節部8を回動させると螺子係合されている中継部材7の雄螺子40と雌螺子39の

係合量をもって印字体6を本体10内を上下摺動可能にして、無端印字ベルト5の最下位置の高さを調整している。これにより、固定印12と無端印字ベルト5の印面位置を同一高さに調整できる。また、弾発部材9を調節部8の係止鈔21に当接し、更に、外装体11の上方開口端（当接棚36）に常時は当接している。

【0011】9は、弾発部材であり、使用するのは圧縮コイルスプリングである。弾発部材9は、回転子2より上方に設けられており、外装体11と本体10の位置により印字体6及び外装体11を上方に一部弾発移動させる作用を有する。また、弾発部材9の下方端は蓋板30に当接され、上方端は調節部8に張設された係止鈔21の下面に当接され、前記弾発部材9は印字体6、調節部8及び外装体11を上方に弾発支持している。10は、筒状の本体であり、中間位置には一対の相対する開口窓23が設けられている。また、90°位相にガイド片14があり表面には、縦方向（軸線と平行方向）にガイド溝15Bを設けており、ガイド溝15Bの上方延長上には導入片16が設けられている。導入片16は、外装体11を組付ける際、無理入れ不可能な時は必要である。また、ガイド溝15Bの最下部より周方向にガイド溝15A（軸線に対して周方向）が連通している。

【0012】前記本体10の下方部には係合部28が設けられ、固定印12を有する固定印受20が、着脱自在に係合している。また、本体10の内部には印字体6を配しており、無端印字ベルト5の最下方端の位置を固定印12と同一印面位置から固定印受20の窓22より上方位置まで上下摺動自在に設けている。更に、前記本体10には、固定印12及び窓35より無端印字ベルト5の露呈する印面を覆うように、キャップ13が着脱自在に係合する突部34を設けている。この印字体6の摺動により前記固定印受20の窓22より上方位置まで摺動して、更に外装体11を上方に引き上げると誘導突起17はガイド溝15Bの上端面15Cに当接して回転子2を完全に露呈して、無端印字ベルト5の印字部分をえることが可能となる。また、前記本体10の上部には孔41を4箇所設けており、蓋板30の片面に張設された係合足29と係合する。係合足29は、孔41と同数設けられている。

【0013】蓋板30はドーナツ状の板であり前記蓋板30を組付けた時、孔19より調節部8を常に露呈している。11は、筒状の外装体であり、上方開口端の上部窓18を覆い隠す様に調節部キャップ27を着脱自在に嵌着させており、下方開口端内壁には相対する一対の誘導突起17を設けている。前記外装体11は、常時は誘導突起17がガイド溝15Aの固定端33に位置しており外装体11と本体10の係合し、当然窓23を覆っている。誘導突起17は、前記ガイド溝15（ガイド溝15A、15B）に当接誘導される。

【0014】13は、有底筒状のキャップであり底に

は、インキを含浸したインキパッド24を設けており、本体10の外周面に設けられた突部34に着脱自在に係合する。また前記インキパッド24は弾発部材により弾発支持されていてもよい。不使用時には、キャップ13の底面に設けられたインキパッド24に固定印12と無端印字ベルト5が当接されてインキを供給している。前記キャップ13を取り外し捺印する。

【0015】次に、本発明の回転印を組み付けるには、枠体1の下部に支持片4を保持させ、無端印字ベルト5を掛けた回転子2を数組、軸3に回転自在に支持させ、前記軸3を前記枠体の中間部に設けられた支持溝25に保持させ、前記支持片4とで、無端印字ベルト5を張設支持している。そして、印字体6を本体10内部に上下摺動自在に配設し、上方より蓋板30を被せ、孔19より中継部材7が露呈するようにして前記蓋板30の係合足29と孔41とが係合させる。そして、弾発部材9を蓋板30に載設して、調節部8の係止鈔21に前記弾発部材9の上端を当接して、前記調節部8の雌螺子39と中断部材7の雄螺子40が螺子係合している。こうして、印字体6及び調節部8を上方に弾発支持している。

【0016】次に、本体10に外装体11を上方より覆い被せる。この時、誘導突起17の位置をガイド溝15Bの延長上に位置させ前記のごとく上方より無理入れを行ない、前記誘導突起17とガイド溝15Bに上下摺動自在に組みつける。また、無理入れのほかに、ガイド溝15Bの上方延長上にガイド溝15Bとは連通しない導入片16を設ければ更に、外装体11の組み付けが行ないやすくなる。

【0017】前記ガイド溝15Bに沿って外装体11を押し下げ、前記外装体11の上方開口端内壁に調節部8の係止鈔21を押圧当接させながら、前記誘導突起17を下方に移動させ、更に、本体10の周方向に設けられたガイド溝15Aに、前記誘導突起17を移動させ、固定端33近くのガイド溝15Aは、浅くなっているので誘導突起17を外側に押圧し、外装体11を固定させるとともに固定印受20に設けられた、固定印12の窓35から露呈された無端印字ベルト5の最下方端の位置と固定印12と同一印面位置にすることが出来、捺印可能とする。最後に、外装体11の上方より調節部キャップ27を着脱自在に嵌合させ、下方よりキャップ13を着脱自在に嵌合して、組付けられる。

【0018】本発明の回転印の日付等を変更しようとするならば、外装体11と本体10をもって左右どちらかに回転させる。すると、外装体11の下方内壁面に設けられた誘導突起17は、固定端33近くのガイド溝15Aの浅いところから出て本体10の外周面に設けられた円周方向のガイド溝15Aによって誘導される。更に、誘導突起17は、外装体11の回転とともに、ガイド片14の縦方向ガイド溝15Bの下方に位置する。すると外装体11の上方開口端は、係止鈔21に当接しており

弾発部材 9 に抗して下方に押圧されているので誘導突起 17 がガイド溝 15B の下方に位置すると、外装体 1 、印字体 6 及び調節部 8 は弾発部材 9 により上方に弾発移動する。すると、外装体 11 は、少し開放した状態になり印字体 6 及び調節部 8 は、上方に位置するとともに無端印字ベルト 5 の最下点が窓 22 より上方に位置する。

【0019】更に、この状態で外装体 11 を縦方向に引き上げると、誘導突起 17 は、縦方向ガイド溝 15B に誘導され、上方に移動して回転子 2 を露呈することとなる。この状態で回転子 2 を回転させて、日付を変更する。変更し終わると上記とは逆に作動させ、再び捺印可能な状態にもどる。更に又、無端印字ベルト 5 の最下印面位置と固定印 12 の印面位置と同一にするには、調節部キャップ 27 と外装体 11 の上部とのクリック嵌合を解除する。すると、調節部 8 は露呈され、回転させると中継部材 7 と螺子係合しているので係合量の多少で印字体 6 を上下に搖動自在にして調整する。

【0020】第 2 の実施例は、図 6 により詳細に説明すると、第 1 の実施例で使用した蓋板 30 をなくし、本体 10 の上部内壁に支持棚 42 を設け弾発部材 9 の下端を当接支持し、前記弾発部材 9 の上端を調節部 8 の係止鍔 21 に当接支持している。また、本体 10 の上方開口端には、孔 19 が設けられており調節部 8 を露呈し、中継部材 7 と印字体 6 の上方位置で当接規制している。この時、支持棚 42 は、本体 10 と一体に設けられている。組みつけ方法は、印字体 6 を下から本体 10 内部に挿入させ中継部材 7 を孔 45 より露呈させ弾発部材 9 を載設するとともに調節部 8 を螺子係合させる。そして、固定印受 20 を本体 10 の下方開口端に着脱自在に嵌合固定する。

【0021】材質については、本体 10 、枠体 1 、支持片 4 、固定印受 20 、蓋板 30 、外装体 11 、回転子 2 、調節部 8 、キャップ 13 、調節部キャップ 27 は、熱可塑性樹脂や熱硬化性樹脂の合成樹脂であってよい。また、枠体 1 、支持片 4 は金属部品であってよい。

#### 【0022】

【効果】以上の様な構成であるので、ロックリングを使用せず、確実に容易に回転させて外装体 11 と本体 10 とを係脱させて、回転子 2 を露呈させることができる。また、こうすることによって部品点数、コストダウンを可能とする。更に、外装体 11 を開けて、回転子 2 を回動する際、インキより離して上部に弾発部材 9 を設けたことにより、インキによるクラック等部材の変形がなくなった。また、印字体 6 だけでなく外装体 11 をも弾発部材 9 により上方に移動させることが出来るので、使用しやすく、更には、外装体 11 と本体 10 が分離することがないので外装体 11 を無くすこともない。

#### 【0023】

#### 【図面の簡単な説明】

【図 1】本発明の第 1 の実施例の断面図

【図 2】本発明の第 1 の実施例の外装体 11 の開放断面図

【図 3】本発明の第 1 の実施例の一部部品の斜視図

【図 4】本発明の第 1 の実施例の誘導突起 17 がガイド溝 15A に位置している略説明図

【図 5】本発明の第 1 の実施例の誘導突起 17 がガイド溝 15B に位置している略説明図

【図 6】本発明の第 2 の実施例の断面図

【0024】

#### 【符号の説明】

1 : 枠体

2 : 回転子

3 : 軸

4 : 支持片

5 : 無端印字ベルト

6 : 印字体

7 : 中継部材

8 : 調節部

9 : 弹発部材

10 : 本体

11 : 外装体

12 : 固定印

13 : キャップ

14 : ガイド片

15 : ガイド溝

15A : ガイド溝

15B : ガイド溝

16 : 導入片

17 : 誘導突起

18 : 上部窓

19 : 孔

22 : 窓

23 : 開口窓

24 : インキパッド

25 : 支持溝

26 : 切欠

27 : 調節部キャップ

40 : 28 : 係合部

29 : 係合足

30 : 蓋板

31 : 作用部

32 : 無端印字ベルト掛部

33 : 固定端

34 : 突部

35 : 窓

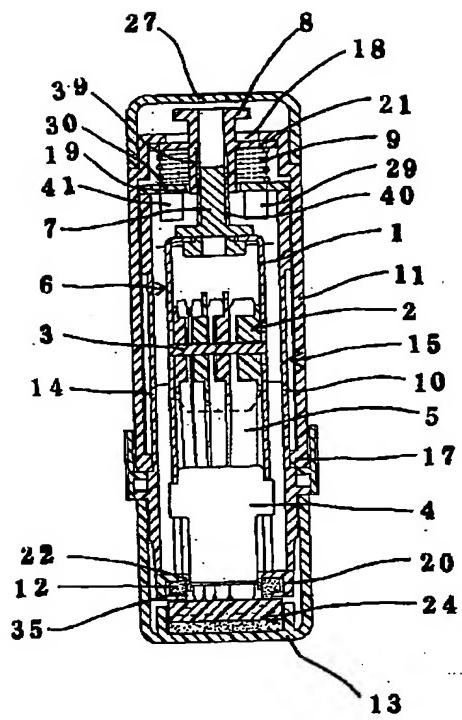
39 : 雌螺子

40 : 雄螺子

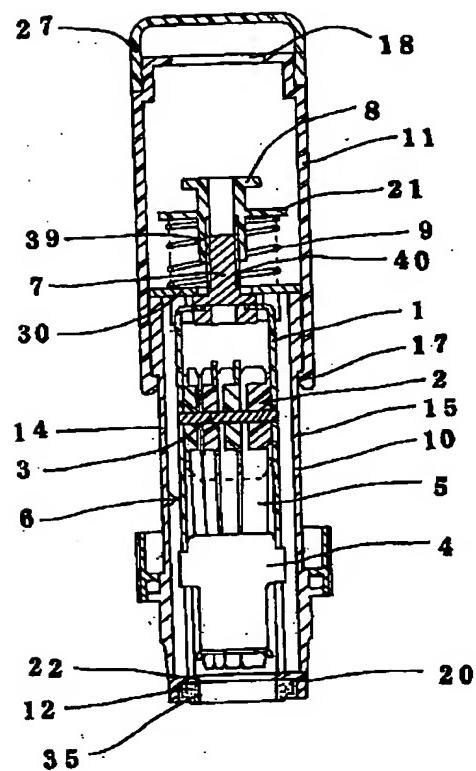
50 : 41 : 孔

42：支持棚

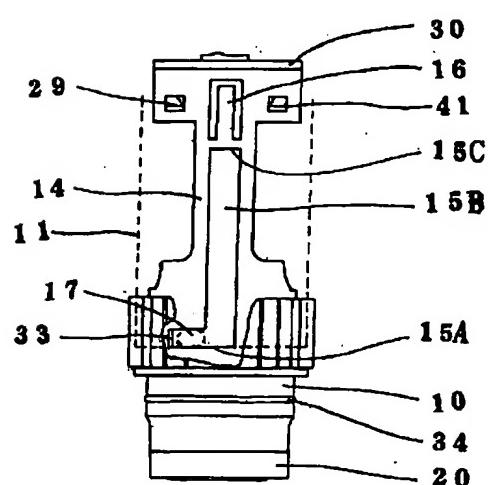
【図1】



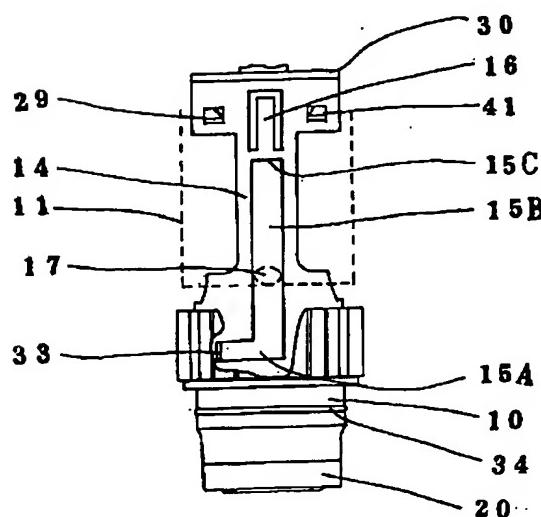
【図2】



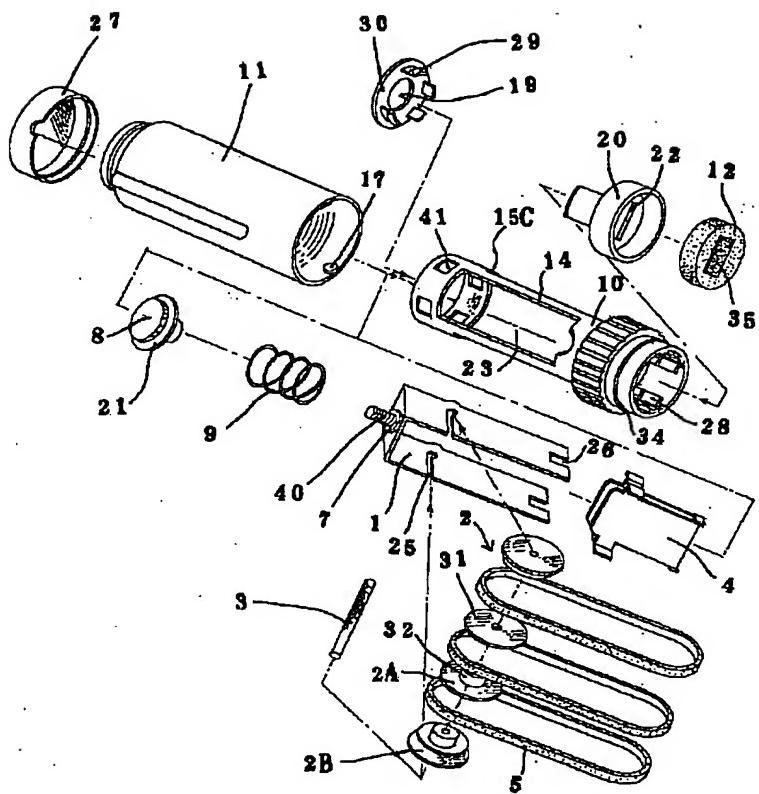
【図4】



【図5】



【図3】



【図6】

